

# PV Series— Low & Medium Voltage Plastic Encapsulated SMD Varistors

## Description

The PV Series is a line of surface mount plastic-encapsulated varistors designed to protect electronic equipment against high voltage surges in the low and medium voltage region. They offer direct SMD equivalents to 5mm and 7mm leaded disc varistors. The thermoplastic encapsulation is non-flammable according to the standard defined by UL94V-0. Terminations are tinned copper sheet.



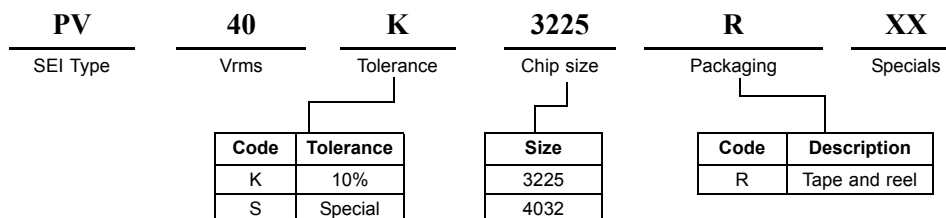
PV varistors are designed exclusively for surface mounting and are available in two model sizes. These transient voltage suppressors cover operating voltages (Vrms) from 11V to 300V, and feature maximum surge currents from 100A to 1,200A.

## Features

- AC operating voltage (Vrms) from 11V to 300V
- DC operating voltage (Vdc) from 14V to 385V
- Lead-free component
- +85°C continuous operating temperature
- Non-flammable thermoplastic encapsulation case per according to standard UL94V-0
- 2 model sizes available 3225 and 4032
- Dimensional and weight savings on board
- Easily solderable tinned copper terminations
- UL, CAC, CEDD approved

| General Technical Data                    |                 |                                |
|---|-----------------|--------------------------------|
| Climatic Category                         | 55 / 125 / 56   | In accordance with IEC 60068-1 |
| Operating Temperature                     | -40°C to +85°C  | In accordance with CECC 42 000 |
| Storage Temperature Range                 | -40°C to +125°C |                                |
| Threshold Voltage Temperature Coefficient | <-0.05%/°C      |                                |
| Response Time                             | < 5 nS          |                                |

## How to Order



## Standard Packaging Options/ Quantities

| Series | Voltage Range (Vrms) | Chip Size |       |
|--------|----------------------|-----------|-------|
|        |                      | 3225      | 4032  |
| PV     | 11 – 150             | 1,500     | 1,000 |
|        | 175 – 300            | 1,000     | 1,000 |

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## Device Ratings and Dimensions

| Part Number   | V <sub>RMS</sub><br>(volts) | V <sub>DC</sub><br>(volts) | V <sub>N</sub><br>(volts) | V <sub>C</sub><br>(volts) | I <sub>C</sub><br>(amps) | W <sub>MAX</sub><br>(joules) | P <sub>MAX</sub><br>(watts) | I <sub>P</sub><br>(amps) | C <sub>TYP</sub><br>(pF) | h<br>(mm) | L<br>(mm) | W<br>(mm) | t<br>(mm) |
|---------------|-----------------------------|----------------------------|---------------------------|---------------------------|--------------------------|------------------------------|-----------------------------|--------------------------|--------------------------|-----------|-----------|-----------|-----------|
| PV 11 K 3225  | 11                          | 14                         | 18                        | 36                        | 1                        | 0.6                          | 0.01                        | 100                      | 1,600                    | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 14 K 3225  | 14                          | 18                         | 22                        | 43                        | 1                        | 0.7                          | 0.01                        | 100                      | 1,300                    | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 17 K 3225  | 17                          | 22                         | 27                        | 53                        | 1                        | 0.9                          | 0.01                        | 100                      | 1,050                    | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 20 K 3225  | 20                          | 26                         | 33                        | 65                        | 1                        | 1.1                          | 0.01                        | 100                      | 750                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 25 K 3225  | 25                          | 31                         | 39                        | 77                        | 1                        | 1.2                          | 0.01                        | 100                      | 660                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 30 K 3225  | 30                          | 38                         | 47                        | 93                        | 1                        | 1.5                          | 0.01                        | 100                      | 580                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 35 K 3225  | 35                          | 45                         | 56                        | 110                       | 1                        | 1.8                          | 0.01                        | 100                      | 460                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 40 K 3225  | 40                          | 56                         | 68                        | 135                       | 1                        | 2.2                          | 0.01                        | 100                      | 400                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 50 K 3225  | 50                          | 65                         | 82                        | 135                       | 5                        | 2.5                          | 0.10                        | 400                      | 390                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 60 K 3225  | 60                          | 85                         | 100                       | 165                       | 5                        | 3.0                          | 0.10                        | 400                      | 330                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 75 K 3225  | 75                          | 100                        | 120                       | 200                       | 5                        | 4.0                          | 0.10                        | 400                      | 270                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 95 K 3225  | 95                          | 125                        | 150                       | 250                       | 5                        | 6.0                          | 0.10                        | 400                      | 220                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 115 K 3225 | 115                         | 150                        | 180                       | 300                       | 5                        | 6.5                          | 0.10                        | 400                      | 180                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 130 K 3225 | 130                         | 170                        | 205                       | 340                       | 5                        | 7.0                          | 0.10                        | 400                      | 160                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 140 K 3225 | 140                         | 180                        | 220                       | 360                       | 5                        | 7.5                          | 0.10                        | 400                      | 150                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 150 K 3225 | 150                         | 200                        | 240                       | 395                       | 5                        | 9.0                          | 0.10                        | 400                      | 140                      | 1.7       | 8.0       | 6.3       | 3.4       |
| PV 175 K 3225 | 175                         | 225                        | 270                       | 455                       | 5                        | 9.5                          | 0.10                        | 400                      | 120                      | 2.3       | 8.0       | 6.3       | 4.7       |
| PV 230 K 3225 | 230                         | 300                        | 360                       | 595                       | 5                        | 10.0                         | 0.10                        | 400                      | 95                       | 2.3       | 8.0       | 6.3       | 4.7       |
| PV 250 K 3225 | 250                         | 320                        | 390                       | 650                       | 5                        | 11.0                         | 0.10                        | 400                      | 80                       | 2.3       | 8.0       | 6.3       | 4.7       |
| PV 275 K 3225 | 275                         | 350                        | 430                       | 710                       | 5                        | 13.0                         | 0.10                        | 400                      | 75                       | 2.3       | 8.0       | 6.3       | 4.7       |
| PV 300 K 3225 | 300                         | 385                        | 470                       | 775                       | 5                        | 15.0                         | 0.10                        | 400                      | 70                       | 2.3       | 8.0       | 6.3       | 4.7       |
| PV 11 K 4032  | 11                          | 14                         | 18                        | 36                        | 2.5                      | 1.1                          | 0.02                        | 250                      | 3,100                    | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 14 K 4032  | 14                          | 18                         | 22                        | 43                        | 2.5                      | 1.3                          | 0.02                        | 250                      | 2,500                    | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 17 K 4032  | 17                          | 22                         | 27                        | 53                        | 2.5                      | 1.6                          | 0.02                        | 250                      | 1,900                    | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 20 K 4032  | 20                          | 26                         | 33                        | 65                        | 2.5                      | 2.0                          | 0.02                        | 250                      | 1,500                    | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 25 K 4032  | 25                          | 31                         | 39                        | 77                        | 2.5                      | 2.4                          | 0.02                        | 250                      | 1,260                    | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 30 K 4032  | 30                          | 38                         | 47                        | 93                        | 2.5                      | 2.8                          | 0.02                        | 250                      | 1,050                    | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 35 K 4032  | 35                          | 45                         | 56                        | 110                       | 2.5                      | 3.4                          | 0.02                        | 250                      | 850                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 40 K 4032  | 40                          | 56                         | 68                        | 135                       | 2.5                      | 4.1                          | 0.02                        | 250                      | 720                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 50 K 4032  | 50                          | 65                         | 82                        | 135                       | 10                       | 6.5                          | 0.25                        | 1,200                    | 820                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 60 K 4032  | 60                          | 85                         | 100                       | 165                       | 10                       | 7.0                          | 0.25                        | 1,200                    | 680                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 75 K 4032  | 75                          | 100                        | 120                       | 200                       | 10                       | 9.0                          | 0.25                        | 1,200                    | 550                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 95 K 4032  | 95                          | 125                        | 150                       | 250                       | 10                       | 11.0                         | 0.25                        | 1,200                    | 440                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 115 K 4032 | 115                         | 150                        | 180                       | 300                       | 10                       | 13.0                         | 0.25                        | 1,200                    | 360                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 130 K 4032 | 130                         | 170                        | 205                       | 340                       | 10                       | 15.0                         | 0.25                        | 1,200                    | 320                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 140 K 4032 | 140                         | 180                        | 220                       | 360                       | 10                       | 18.0                         | 0.25                        | 1,200                    | 300                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 150 K 4032 | 150                         | 200                        | 240                       | 395                       | 10                       | 18.5                         | 0.25                        | 1,200                    | 280                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 175 K 4032 | 175                         | 225                        | 270                       | 455                       | 10                       | 21.0                         | 0.25                        | 1,200                    | 250                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 230 K 4032 | 230                         | 300                        | 360                       | 595                       | 10                       | 23.0                         | 0.25                        | 1,200                    | 190                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 250 K 4032 | 250                         | 320                        | 390                       | 650                       | 10                       | 25.0                         | 0.25                        | 1,200                    | 180                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 275 K 4032 | 275                         | 350                        | 430                       | 710                       | 10                       | 29.0                         | 0.25                        | 1,200                    | 160                      | 2.3       | 10.0      | 8.0       | 4.7       |
| PV 300 K 4032 | 300                         | 385                        | 470                       | 775                       | 10                       | 30.0                         | 0.25                        | 1,200                    | 150                      | 2.3       | 10.0      | 8.0       | 4.7       |